ON

THE COMPARATIVE CLAIMS

OF

CRANIOTOMY AND THE CÆSAREAN SECTION

IN A

CERTAIN CLASS OF LABOURS;

AND ON

THE USE OF A NEW PELVIMETER.

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USE OF A NEW PELVIMETER.[a]

The following cases may prove interesting as aiding to prove the important question when the Cæsarean section may be justly adopted. It has been stated by the writer, in his published lectures, that the cases there quoted seemed to establish the rule, "that in the ovate deformity of the pelvis, if the conjugate axis be less than two inches craniotomy should not be attempted, but an effort made by the Cæsarean section to save the child."[b] The cases now brought forward afford additional evidence to prove the great danger of craniotomy when the disproportion is so great, and lead us to doubt the propriety of destroying the child by an operation which seems as likely to destroy the mother.

Craniotomy, as compared with the Cæsarean section, seems to the writer in these cases equally dangerous, and, therefore, he would feel it his duty to adopt the latter operation as being the best means of saving, at least, one life.

The cases now quoted were brought into University College Hospital, it might be said, at the eleventh hour, to have the Cæsarean section performed; but in both cases the children were already dead, and, therefore, craniotomy was preferred as being generally considered less dangerous to the mother; but had the children been alive the writer would have felt perfectly justified in having them removed by the Cæsarean section. It is only necessary to compare these cases with that of Mr. James Hawkins, of Newport, to form an opinion.[c]

M. A., a dwarf, four feet one inch high, was taken in labour of her first child on Tuesday, December 22nd, at about 12 o'clock in the day.

The midwife who was engaged to attend was at once sent for; she came about 3 o'clock, tried her pain, and said that she thought all was going on well. She left, and was again sent for at midnight, but, being engaged with a labour, she did not arrive until 3 o'clock on Wednesday morning.

December 23rd.—The midwife remained until 3 30 in the afternoon, and finding no advance she sent for advice. A medical practitioner arrived, who, finding a difficulty, left the patient, about 5 o'clock,

[a] The author was not aware, when this Paper was written, that a similar instrument had been contrived and published by Dr. Lumley Beale, of Birmingham.

[b] Murphy's Midwifery, Second Edition, p. 336.

[c] Medical Times and Gazette, Vol. xxxvii., pp. 488, 489.

to obtain a second opinion. Having succeeded, both gentlemen remained with the patient until about 8 p.m., and then left her. The patient's friends, who were, no doubt, anxious and indignant, stated "that from 8 o'clock on Wednesday evening until past 11 on Thursday morning they neither heard nor saw anything of the doctors."

The medical practitioner in attendance then arrived, with another gentleman, who, having made an examination, had the patient removed from her bed to a table, where she remained for about twenty minutes, and was then replaced. This, perhaps, was for the purpose of a more accurate examination, but the result was that she was sent to University College Hospital about 5 in the afternoon, in order to have the Cæsarean section performed.

Messages were sent to the writer, and Mr. Marshall, surgeon to the hospital, and both arrived about half-past 5 o'clock.

An examination being made, it was ascertained that the os uteri was dilated to rather more than the size of a tea cup; was thick and tender, the head protruding through it, with the bones strongly overlapped.

It was evident that the child was not only dead but putrid. The promontory of the sacrum could be felt with the fore-finger easily, proving the greatly diminished space in the conjugate axis.

In consultation with Mr. Marshall I objected to have the Cæsarean section performed to remove a putrid child, and, therefore, undertook the rather arduous task of extracting it by craniotomy. The head was easily perforated, and the brain removed; the parietal bones at once separated and were taken away; the crotchet (Churchill's) was then fixed in the frontal bone, and again in the occipital, acting alternately, so that by great care and equal difficulty the head was brought into the cavity of the pelvis, but no force could advance it farther; at length, after several efforts, the head separated from the neck. I succeeded in bringing down one arm, fixed a tape round the wrist, and hoped by this means to extract. But no; the shoulder was almost pulled out of its socket without effect; I therefore sought for the second arm, and succeeded in getting it down; pulling, then, on both, the body was at length extracted.

The cause of the difficulty was immediately revealed. The abdomen was enormously distended with flatus, occupying the brim in such a manner as to resist every effort to extract the head or the body until both arms were brought down.

This patient was altogether fifty-three hours in labour—very much exhausted and depressed; she had gone through a very severe labour, and had other causes of mental anxiety. She had some bronchitis on admission, but it did not assume a serious aspect until she was delivered. She was immediately given a composing draught.

December 25th.—The vagina was carefully syringed with decoction of poppies, and the solution of the hydrochlorate of morphia (M. xv.) given in wine every second hour. There was no tenderness of the abdomen, but

increased difficulty in respiration. The morphia and wine were suspended, and every means used to allay the difficulty of breathing, but without effect. She sunk on the morning of the 26th.

On examination after death the bronchi were found filled with a great quantity of mucus, the walls of the tubes being highly injected. A section of the lung exhibited some spots of incipient lobular pneumonia. The liver and heart were healthy; no evidence whatever of inflammation either in the peritoneum or the uterus. Both kidneys were flabby and friable, the capsules easily separating; the cortical substance was very wide, the medullary indistinct, and the pyramidal broadly marked, showing evidence of albuminuria.

The pelvis, having the ovate deformity, was carefully measured. The conjugate axis, from sacrum to pelvis, was $2\frac{1}{4}$ inches. The death in this case may be attributed to bronchitis; but occurring, as it did, twenty hours after delivery, it may, perhaps, be better explained as the result of shock to a constitution already diseased.

Shortly after this case occurred, another of a similar kind presented itself:—

H. S., aged twenty-five, a charwoman, of low stature, was taken in labour, Tuesday, January 5, 1864, in the evening, with the usual premonitory symptoms—pains and cramps in the abdomen—which continued, with more or less force, all that night. Severe and regular pains set in on Wednesday, and continued Wednesday night and Thursday, when, at 5 30, p.m., her sister sought for medical advice.

A medical gentleman soon attended, and remained with the patient until about 7, p.m., when he left.

Friday, January 8.—At 3, a.m., the patient's husband went for the practitioner, who at once attended, and remained until 7 o'clock. No progress being made, he left, and returned at mid-day. Finding no difference, he determined on a consultation.

At 4, p.m., two medical gentlemen returned; and, after a consultation, determined on the operation of craniotomy. The head was perforated, and an attempt made at delivery, but, after two hours' unsuccessful efforts, they determined that the fetus should be removed by the Cæsarean section. For this purpose she was sent to University College Hospital, about 10, p.m.

The writer was sent for, and arrived about half-past 10, p.m. Having made an examination, he found the promontory of the sacrum equally within reach of the fore-finger, as in the former case; the broken bones of the head occupied the brim. The contraction of the brim was apparently the same, and the child dead. He, therefore, could not consent to the removal of a dead child by the Cæsarean section.

The extraction of the child by the crotchet was undertaken. The bones of the head being so much compressed there was some difficulty in

getting the crotchet within the cranium; at length it was introduced, and fastened on the frontal bone. Immense force was required to move the head at all, but at length it advanced very slowly. The frontal bone gave way. The crotchet was then fixed on the occipital, and, by pressing the bone with the fingers strongly against the instrument, it held sufficiently long to get the head past the brim of the pelvis. Its further advance was then more easy; but, in order to make it secure, an arm was brought down, and the child removed. The operation occupied two hours.

The patient, although very much exhausted, bore the operation very well. An anodyne was ordered, and poppy fomentation for the vagina.

January 9, 8, a.m.—The patient slept well; skin, moist; pulse, 170. She takes nourishment (beef tea, milk, wine) well. A bark mixture was ordered, with sesqui-carbonate of ammonia in effervescence.

January 10.—She seems going on favourably. The surface was sponged over with warm sponges, and the same treatment continued.

January 11, 4, a.m.—Mr. Roberts, the obstetric assistant, was called by the nurse, who found the patient in a state of great exhaustion. The pulse was very feeble. Stimulants, however, were freely administered, and after some time she rallied. At mid-day she was in a great degree restored, and slept well that night.

January 12.—She seems much better; the skin is moist; pulse, 140, with some slight delirium, and pain in the abdomen. The lochia are suppressed.

January 13.—The patient has had some sleep, and seems refreshed. She went on during the day without any unfavourable symptoms. In the evening she was more herself; pulse, 140, soft and compressible; no pain in the abdomen, but some symptoms of bronchitis have shown themselves.

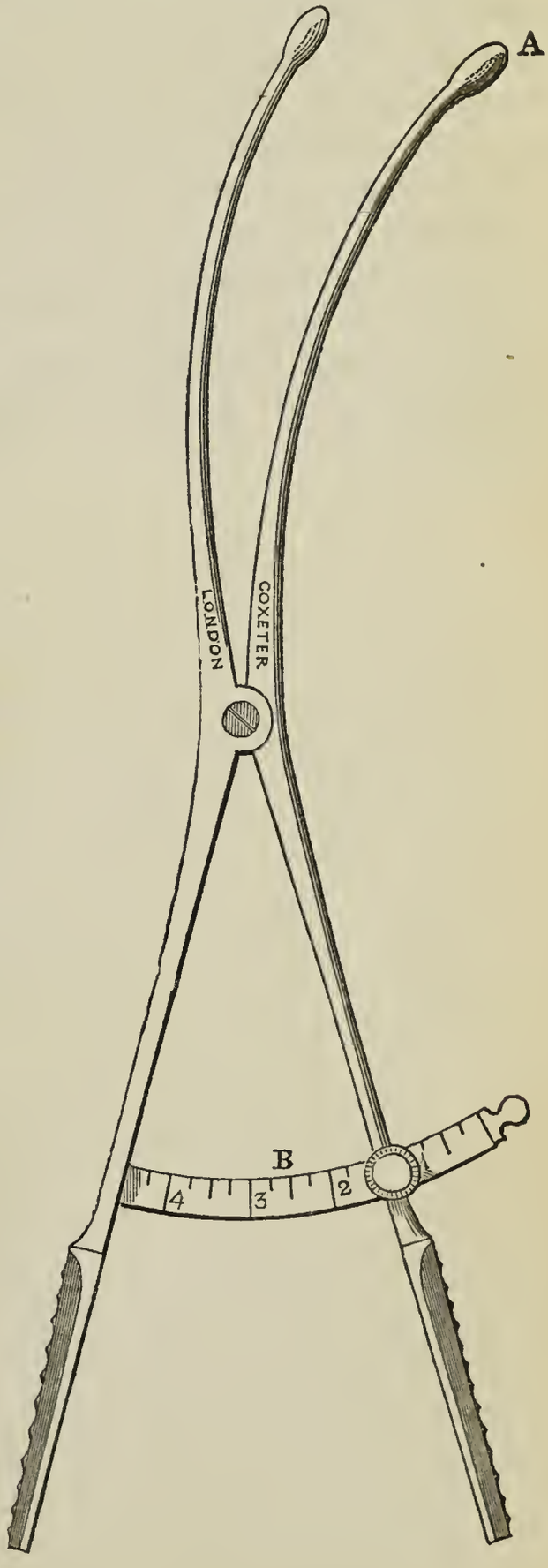
January 14.—Bronchitis much increased, with great difficulty of respiration, which could not be relieved by all the efforts used. She sunk at 6 30, p.m.

January 15.—*Post-mortem* examination.—Lungs (left): bronchial tubes highly injected; small masses of pneumonia throughout the lower lobe. Right: at the base numerous patches of hemorrhagic extravasation under the pleura. Bronchial tubes highly injected; the lower lobe or section showed large masses of pneumonia, which broke down easily under the finger. Intestines much distended with flatus; no sign of peritonitis except in the neighbourhood of the uterus, where a small patch of lymph was found, low down on the left side, and the nearest coil of intestine was united to it by two slight adhesions. The uterus was well contracted and healthy. Pelvis: the conjugate axis, from sacrum to pubis, was $2\frac{1}{3}$ inches.

In this case there was a much more favourable prospect of recovery than in the former. Bronchitis suddenly seized her on the fifth day, and she sunk under it. She might, however, have resisted the attack

had not her constitution been previously exhausted by her labour and its results. It occupied, from its commencement on Tuesday, 5th, seventy-two hours. She also underwent, before her admission into the hospital, an operation which is stated to have occupied two hours, and in the hospital two hours more were consumed in her delivery. This was sufficient to produce great exhaustion, and evidence of it was given, before the attack of bronchitis, by the sudden faintness which seized her on the 11th. The contraction of the brim of pelvis was greater than in the former case.

Both cases prove the great danger of craniotomy when the disproportion is so great, and seem to justify the rule, that when the conjugate axis of pelvis is two inches, or less, the Cæsarean section should be performed *to preserve the child.* In these cases the children were dead, and therefore they were delivered by craniotomy, as being considered a less dangerous operation to the mother. The difference in the danger in such cases is, however, very slight; and, when such is the case we are justified in the endeavour to save the child's life when that of the mother is in such hazard. The danger of delay is equally obvious. If the medical attendant knew, in the first instance, the exact disproportion and its consequences, a consultation would be at once determined upon, and the proper steps taken; but, unfortunately, not knowing the exact disproportion, there is the disposition to trust too much to what "time will bring forth," and either operation is commenced a great deal too late.



To obviate this objection the writer has had a pelvimeter made, which in principle is extremely simple, can be very easily applied, and may be carried in the ordinary instrument-case.

Two small blades are so applied as to form a rod a little thicker than

the uterine sound. These are separated by compressing the handles to which they are applied, and the distance between them is marked on a scale attached to one of the handles.

When the examining finger is introduced, and touches or comes near to the promontory of the sacrum, the instrument can be easily passed up to and beyond the finger. The blades separate by the pressure of the handles until one is arrested at the pubis.

The exact distance between the pubis and sacrum being thus ascertained, a small pivot can be screwed on the scale, so as to prevent any moving of the handles, and fix the space marked. When the instrument is withdrawn the distance between the blades may be again measured to prove the correctness of the scale.

This instrument may be applied to any pelvis, but it is especially intended for that having the ovate deformity, where the head cannot enter the brim, and it is a question whether craniotomy or the Cæsarean section should be performed. The importance of having such a question decided without unnecessary delay has led the writer to propose this instrument, which he trusts will be found to answer its purpose.—*March* 12, 1864.